because it was transported to the holes that were provided in the film **206** as clearance for the screws. No water poured out of the front or the back of the keyboard **208** when tilted. Water was found on both the top and bottom sides of the film **206**, and water was found on the top surface of the metal plate **202**.

[0148] In the spill test for Example 8, most of the water was collected in the back of the keyboard **208**. No water poured out of the front or the back of the keyboard when it was tilted. Water was only found on the top of the microstructured film **206**. No water was found on the top side of the metal plate (presumably because of the effective seal around the screws resulting from the absence of pre-punched holes around the screws).

[0149] The results of these spill tests are tabulated in Table 1 below. The amounts indicated in Table 1 represent those amounts (by weight) of water collected from the various sources indicated.

TABLE 1

Water Collected in Passive Transport Example Spill Tests (by weight, in grams)

	On Metal Plate and Film	On Side Paper Towel 212	On Bottom Paper Towel 210	On Side Paper Towel 214
Example 6	4	0	14	4
Example 7	5	9.3	8.7	2
Example 8	4	2	11	4

[0150] In the fluid collection devices of Examples 6, 7 and 8, no cap layer was provided (although a porous cap layer or filter may be useful in laptop applications such as, for example, a nonwoven porous filter adhered over the structured surface). As evidenced by the spill test observations and data, the use microreplicated structured surfaces for water collection and removal can significantly limit the exposure of adjacent components to moisture. In the spill test for Example 8, where the microstructured film had no pre-punched holes therein, no water was found on the top side of the metal plate, meaning that no water went through the microstructured surface—it was all captured thereon and diverted. In a commercial application of the inventive assembly, the microstructrured film is preferably affixed to its support substrate by a pressure sensitive adhesive.

[0151] Group III—Evaporative Enhancement Utilizing Microstructured Materials

[0152] In another test to evaluate the inventive fluid transport tape, an environmental test bed was created to measure the weight loss of water on the structured surface of the tape due to evaporation. The major components of this test system are illustrated in **FIG. 13**, and include an environmental control box **225**, a sloped liquid reservoir **230**, and a data acquisition system (not shown).

[0153] The control box **225** was a five-sided construction box (a box with an open bottom) made out of transparent Lexan plastic to have the following dimensions: 76 cm wide by 122 cm long by 41 cm deep. The box had end panels **232** and **234**, side panels **236** and **238**, and a top panel **240**. The panels were sealed together along their contiguous edges. A dry air inlet hole **242** was formed in the side panel **236**, twenty cm up from the bottom of the box and five cm from the end panel **232**. An air outlet hole **244** was formed in the side panel **238** in a likewise position relative to the end panel **234**. Dry air was provided to the box **225** at a rate of two cubic feet per minute by connecting a lab air supply to a desiccant column, and then connecting by conduit that column to the box **225**, via inlet hole **242**. The outlet hole **244** was left at ambient pressure to allow for outward airflow from the box **225**.

[0154] The fluid reservoir **230** was formed to define two test bed floors **246** and **248** slopping upwardly and away from each other. The test bed floors and other portions of the fluid reservoir were formed from GILLFLOOR® 4017T light weight aircraft flooring panels, available from M. C. Gill Corporation, El Monte, Calif. The floors **246** and **248** were smooth and flat, and were supported by end panels **250** and **252**, and side panels **254** and **256**. A central lateral panel **258** ran across the "V"-groove to divide the fluid reservoir into two side-by-side, mirror image reservoirs **230***a* and **230***b*. The fluid reservoir **230** was 76 cm long, 44 cm wide and aligned with each floor **246** and **248** at a slope of 11E relative to horizontal, with a depth of eight cm adjacent the central panel **260** and a depth of zero cm adjacent the end panels **250** and **252**. Room temperature water was poured into each reservoir **230***a* and **230***b* at the start of each evaporation experiment. The volume of water was measured out to be 100 cubic centimeters, 50 cc for each of the two side-by-side reservoirs. The fluid reservoir **230** was configured to simulate the components in an aircraft wing well, which are subject to corrosion caused by the unintended collection of liquids because of their cooperative and sloped geometries (which in part define a V-shaped sump).

[0155] The data acquisition system was based upon an Ohaus GT 4800 mass balance with an RS-232 serial interface. The mass balance was connected to a personal computer via the serial port. A custom Visual Basic application was used to periodically query the mass balance and record the reading on the computer. The balance was tared when the fluid reservoir was placed upon it, and then the water was added and mass measurements were recorded until the water was completely evaporated. A small, hand-held humidity and temperature monitoring device was placed in the control box to provide values for those conditions during the experiment.

Example 9

[0156] In Experiment 9, the mass loss of water versus time was recorded for the fluid reservoir **230** when contained inside the control box **225**, starting with an initial volume of liquid of 100 cc. Various surface areas of fluid transport tape were applied to the fluid reservoir by centering the tape width-wise and running it from one end along the floors **246** and **248** down the middle of each floor, from the central panel **262** to each floor's respective end panel. The widths chosen for the fluid transport tape were zero (no film), five inches, ten inches and 15 inches. The composition and topography of the fluid transport film was the same for each of these experimental runs, and was the same as used in Example 2 (**FIG. 2***i*). The pressure sensitive adhesive used to adhere the film to the test bed floor was also the same as set forth in Example 2.

[0157] Table 2 presents the evaporation rate (in grams/minute) attained for each of the different film configurations